

## **WLIS: The Whitebark-Limber Pine Information System and What It Can Do for You.**

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Whitebark and Limber Pine Information System (WLIS) is a database of basic plot information on whitebark and limber pines from the numerous surveys and studies that have been completed in the US and Canada. This compilation of summary data permits rangewide assessments of whitebark and limber pines. Forest Inventory and Analysis (FIA) plot data are part of the database. The data can be queried to provide a spatial summary of the condition of these two species. The US National Park Service has created an interface for simplifying entry of future survey/study data by individuals using the survey design developed by the Whitebark Pine Ecosystem Foundation as a template.

There are three main components associated with WLIS. The first is an interactive interface that allows for the easy entry and validation of data and review of data already in the database. Over 2,200 records have been gathered and entered into the database. Additional data can be entered into the user's own copy of the database. This can either be through direct entry via the interface or by collecting data utilizing the US National Park Service database (Pillmore and Frakes) and importing it directly into WLIS. The second component of WLIS is its query builder. This tool allows the user to easily construct queries of the data. Queries can be built for any of the variables included in the database, either individual elements or combined. The results of a query can be viewed through the mapping application, and also can be exported through the interface into a commercially available spreadsheet. The third component is the GIS mapping ability of the program. Selected plots can be mapped along with other spatial components. The survey plot locations can be viewed along with FIA inventory plot locations. This component of WLIS has limited GIS capabilities, but geospatial data can be exported and used in more advanced GIS software.

WLIS was tested by selected individuals prior to release. Following testing and revisions, it has been made available to those interested. The system is available as a CD from the authors or it can be downloaded from the web (<http://www.fs.fed.us/r1-r4/spf/fhp/prog/programs2.html>). Surveyors and researchers collecting data on whitebark and limber pines are encouraged to enter their data and make it available for inclusion in WLIS. Periodic requests for new data will be made using a mailing list created when users download WLIS or request a CD. Users will be notified as updates of the database are made available through the website.

Those interested in assessing the condition of whitebark and limber pines can use WLIS to more effectively plan surveys and identify priority areas to evaluate. Historical trends can also be assessed as multiple surveys are completed and entered.